

WHAT IS CLAIMED IS:

1. An input/output (I/O) unit access switching system, comprising:

a plurality of servers each comprising a control module and an intelligent platform management interface (IPMI) having a baseboard management controller (BMC);

at least one input device;

at least one output device; and

a switching device comprising a microprocessor unit, an input function switching unit connected to the microprocessor unit and each of the BMCs, an output function switching unit connected to the microprocessor unit and each of the servers, an interrupt unit connected to the microprocessor unit and each of the BMCs, at least one set of input connection ports connected to the microprocessor unit and the input device, and at least one set of output connection ports connected to the microprocessor unit and the output device;

wherein when the control module of one of the servers is activated, the BMC of the corresponding server outputs an interrupt request signal to the interrupt unit of the switching device, so as to allow the interrupt unit to determine if the interrupt request signal is transmitted from the server whose control module is activated, and to forward the determination result to the microprocessor unit, whereby the microprocessor unit generates an input switch request signal that is transmitted to the input function switching unit, and generates an output switch request signal that is transmitted to the output function switching unit, such that according to the input and output switch request signals respectively, the input function switching unit and the output function switching unit each generates and transmits a corresponding switch driving signal to the BMC of the server whose control module is activated, and such that this server who receives the switch driving signals is allowed to receive an input signal from the input

device through the corresponding BMC, the input function switching unit and the input connection ports, and to consequently execute operations according to the input signal, as well as to output the operational result to the output device through the output function switching unit and the output connection ports.

- 5 2. The I/O unit access switching system of claim 1, wherein the input connection port is connected to a keyboard or mouse.
3. The I/O unit access switching system of claim 1, wherein the output connection port is connected to a monitor.
4. The I/O unit access switching system of claim 1, wherein the control module is a
10 switch.
5. The I/O unit access switching system of claim 1, wherein the input function switching unit is a multiplexer supporting an I2C transmission interface.
6. The I/O unit access switching system of claim 1, wherein the output function switching unit is a multiplexer.
- 15 7. The I/O unit access switching system of claim 1, wherein the input function switching unit and the BMC of each of the servers transmit input signals from the input connection ports through an I2C transmission interface, so as to allow the server whose control module is activated to receive the input signal from the input device.
8. An input/output (I/O) unit access switching method for use with a plurality of servers
20 each comprising an intelligent platform management interface (IPMI) having a baseboard management controller (BMC), the servers being connected to a switching device that is coupled to a set of I/O devices so as to allow the servers to access switching operations of the I/O devices through the switching device, the method comprising the steps of:
25 (1) determining via the switching device if a request for access to the I/O devices is sent from one of the servers; if yes, proceeding to step (2); if no, returning to step (1);

(2) forwarding the request for access to the I/O devices via the BMC of the corresponding server to the switching device;

(3) according to the received request for access, generating via the switching device a corresponding interrupt signal that is transmitted to a microprocessor unit of the switching device, so as to allow the microprocessor unit to consequently generate a switching signal that is transmitted to an I/O function multiplexer of the switching device; and

(4) according to the switching signal, providing via the I/O function multiplexer the access to the I/O devices for the server who sends the request for access, to allow this server to operate the I/O devices through the I/O function multiplexer; then returning to step (1).

9. The I/O unit access switching method of claim 8, wherein each of the servers has a control module for generating the request for access to the I/O devices.

10. The I/O unit access switching method of claim 9, wherein the control module is a switch.

11. The I/O unit access switching method of claim 8, wherein the I/O function multiplexer is connected to the servers through an I2C transmission interface.

12. The I/O unit access switching method of claim 8, wherein the I/O devices include an input device that is a keyboard or mouse.

13. The I/O unit access switching method of claim 8, wherein the I/O devices include an output device that is a monitor.